REMARKS

Claims 1-24 and 31 remain in the application.

A Petition for Extension of Time to extend the period for response one month, including the appropriate fee, is filed herewith.

A. Comments

The Office Action has indicated on page 1 that it was a "final rejection", which was inconsistent with the body of the Office Action. In a telephone conversation with the Examiner on November 15, 2001, it was clarified that the Office Action was a non-final rejection.

B. 35 U.S.C. § 102(e)

Wong - Claims 1, 2, 5, 8, 15, 18, 20, 23, and 31

Claims 1, 2, 5, 8, 15, 18, 20, 23, and 31 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,083,797 issued July 4, 2000 to Shyh-Chyi Wong and Shi-Tron Lin (hereinafter "the Wong patent") (Office Action, pages 2-4).

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Brothers v. Union Oil Co. of California*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). The identical invention must be shown in as complete detail as is contained in the claim. *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

In the "Response to Arguments" on page 6, the Office Action, by its own admissions, has rendered the present rejection moot. The Office Action states that "It can be interpreted that

though the isolation dielectrics of Wong are considered, 'high modulus,' they still will have an effect on the stresses of the silicon substrate, which is what the claims imply." With the words of "It can be interpreted", the Section 102(e) rejection fails, because the Office Action has to add something beyond the teaching of the Wong patent. Further, the Office Action states that the isolation dielectrics "will have an effect on the stresses of the silicon substrate". This is a mere conjecture, as there is no such teaching within the Wong patent. Thus, in order to make the Wong patent "fit", the Official Action has to add to the teaching of the Wong patent with its own interpretations and conjectures. The moment that this occurs, the Section 102(e) rejection fails, because "[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference", not in the interpretations and conjectures of the Office Action.

Nonetheless, although the Section 102(e) rejection is moot, the Applicants will address some of the contentions of the Office Action.

With regard to independent claim 1 and independent claim 31, the Office Action at page 2 and at page 4, respectively, contends that the Wong patent teaches that the "isolation structure substantially surrounds said active area". However, the Office Action does not show any teaching in the Wong patent that the isolation structure substantially surrounds the active area. The Applicants could find not such teaching in the Wong patent. Thus, as "each and every element" of the claims is not taught by the Wong patent, the rejection to independent claim 1 (and its dependent claims 2, 5, 8, 15, 20, and 23) and independent claim 31 is without merit.

The Office Action further contends that the limitation in independent claim 1 (from which claim 2, 5, 8, 15, 18, 20, and 23 either directly or indirectly depend) of "wherein at least a

portion of said isolation structure is adapted to modify stresses incurred on said active area" is a recitation of the intended use of the claimed invention and does not differentiate the claimed composition of the elements from those known to prior art. Applicants strongly disagree with this assessment and believe the limitation to be valid. If the isolation structure is not structural adapted to modify stresses incurred on the active area, then it does not fall within the scope of the present claims. Therefore, the limitation is valid and the Wong patent neither teaches nor suggests an isolation structure that modifies stresses incurred on the active area.

Applicants added independent claim 31 in an Amendment filed June 19, 2001, which claims in total: "A semiconductor device, comprising: an active area formed in a semiconductor substrate; and a stress modifying isolation structure comprising at least one dielectric material disposed within a trench which extends into said semiconductor substrate, wherein said isolation structure substantially surrounds said active area." Although the claim does not use "adapted to" language, the Office Action at page 6 contends that the rejection of "intended use" still applies. However, the limitation of a "stress modifying" isolation structure is no different than a limitation of "metal" in a claim stating "a metal rod". If a rod shown in a prior art reference is not metal then it cannot be used as in a Section 102 rejection, because the prior art reference must be in "as complete detail as is contained in the claim". Likewise, the Wong patent does not teach or suggest a "stress modifying" isolation structure, and, thus, it fails as a Section 102(e) rejection.

With regard to claims 5, 15, and 20, the Office Action contends that the Wong patent teaches a trench has a depth in ratio to the active area width is greater than 0.5. However, the Office Action does not specifically show any teaching in the Wong patent of such a ratio, nor could the Applicants find any such teaching. Moreover, not even the drawings show such a ratio

between the STI depth and the width of the active area. Thus, as this limitation is neither taught nor suggested by the Wong patent, the Section 102(e) rejection to these claims is improper.

Thus, it is clear that by the Office Action's own admission and from the actual teachings of Wong patent that the Section 102(e) is without merit. Therefore, reconsideration and withdrawal of the Section 102(e) rejection of claims 1, 2, 5, 8, 15, 18, 20, 23, and 31 over the Wong patent are respectfully requested.

C. 35 U.S.C. § 103(a)

Wong in view of Lur – Claims 3, 4, 6, 7, 9-14, 16, 17, 19, 21, 22, and 24

Claims 3, 4, 6, 7, 9-14, 16, 17, 19, 21, 22, and 24 stands rejected under 35 U.S.C. § 103(a) as being obvious over the Wong patent in view of U.S. Patent No. 5,395,790 issued March 7, 1995 to Water Lur (hereinafter "the Lur patent") (Office Action, pages 4-6).

M.P.E.P. 706.02(j) sets forth the standard for a Section 103(a) rejection:

> To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

As previously discussed for the Section 102(e) rejection, the Wong patent does not teach or suggest that the isolation structure modifies stresses, nor does the Wong patent teach that the isolation structure substantially surrounds the active area, as required for independent claim 1

(from which claims 3, 4, 6, 7, 9-14, 16, 17, 19, 21, 22, and 24 either directly or indirectly depend). The Lur patent is relied upon by the Office Action for a teaching of a low-modulus dielectric material. Thus, the Lur patent does not overcome the deficiencies in the teaching of the Wong patent. Therefore, even if the Wong patent and the Lur patent were properly combined that presently claimed invention would not be taught or suggested.

More specifically, the Office Action relies upon a teaching of a polyimide used as an insulating material in the Lur patent as a teaching of a low-modulus material. However, the term "polyimide" covers a range of polymer compounds that may or may not be low-modulus. Thus, there is no direct teaching of the requirement of the "polyimide" to be low-modulus.

Furthermore, the Lur patent does not overcome the lack of teaching or suggestion within the Wong patent for an isolation structure that modifies stresses. If fact, it is quite the opposite, as the Lur patent teaches that the isolation structure should be "stress-free" (col. 5, line 20).

Moreover, the Lur patent does not overcome the lack of teaching or suggestion within the Wong patent for an isolation structure that substantially surrounds an active area. The Lur patent merely teaches a method of forming an isolation structure.

Additionally, the Office Action at pages 5 and 6 makes the statement that "[t]he dielectric material is disposed in the trench both parallel and perpendicular to the channel current direction". The Applicants could not find any such teaching or suggestion in either the Wong patent or the Lur patent. The Applicants respectfully request that the Office disclose the location of such a teaching.

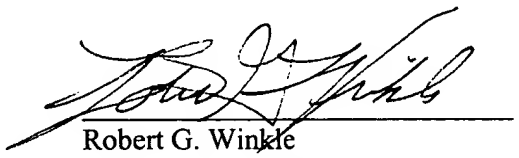
Thus, the Wong patent and the Lur patent, either alone or in combination, do not teach or suggest the presently claimed invention. Therefore, reconsideration and withdrawal of the

Section 103(a) rejection of claims 3, 4, 6, 7, 9-14, 16, 17, 19, 21, 22, and 24 over the Wong patent in view of the Lur patent are respectfully requested.

In view of the foregoing remarks, the Applicants request favorable reconsideration and allowance of the application.

Please forward further communications to the address of record. If the Examiner needs to contact the below-signed attorney to further the prosecution of the application, the contact number is (503) 712-1682.

Respectfully submitted,



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